

# Cocoa Traceability Case Study

FAIRTRADE INTERNATIONAL

WITH GENEROUS FUNDING FROM:



This publication was developed by C-Lever.org

**Authors:** P. Stoop, N. Ramanan, H. Geens, A. Lambrecht and S. Dekeister

## Acknowledgment

C-Lever.org, IDH and GISCO wish to thank Fairtrade International for their time, cooperation and valuable contribution to this study.

## Disclaimer

The opinions expressed in this publication are those of the authors. They do not purport to reflect the opinions or views of the national platforms for sustainable cocoa in Europe and/or their members, nor the stakeholders who were interviewed in the process of developing it.

## Suggested citation:

IDH, GISCO, C-lever.org, 2021: Cocoa Traceability Case Study. Fairtrade International. P. Stoop, N. Ramanan, H. Geens, A. Lambrecht and S. Dekeister.

# Contents

<b>1. Introduction</b>	<b>4</b>
<b>2. Fairtrade International and its supply chain</b>	<b>5</b>
<b>3. The Fairtrade International traceability system</b>	<b>6</b>
3.1 Dimension 1: How is origin information obtained and documented?	6
3.2 Dimension 2: How are sustainability characteristics linked to cocoa lots?	7
3.3 Dimension 3: How is traceability data transferred along the supply chain and verified?	8
<b>4. How does this traceability system provide accountability on sustainability commitments?</b>	<b>9</b>
4.1 Fairtrade definitions for Mass Balance	9
4.2 Rationale behind Fairtrade's adoption of a mass balance approach	9
4.3 Farmer benefits from enhanced traceability and farmer data	10
<b>5. Challenges to traceability identified by Fairtrade International and FLOCERT</b>	<b>11</b>



# 1. Introduction

**Improving the transparency and traceability of the cocoa value chain<sup>1</sup> is an important means of improving accountability and sustainability of the chocolate and cocoa sector.** For example, full traceability from farm level to first purchase point is one of the commitments of the Cocoa & Forests Initiative. This initiative is a public-private partnership aiming to end deforestation and restore forest areas. It was signed in November 2017 by the governments of Ghana and Côte d'Ivoire and a group of 35 companies. A similar framework, the Roadmap to Deforestation-free Cocoa<sup>2</sup>, was signed in Cameroon in January 2021 by the government, companies, farmer organizations and NGOs, and aims to ensure the traceability of 100% of the cocoa supply from the farmgate via the warehouse to the port of exit by the end of 2025.

**This is one of a series of four case studies that were developed to provide a deeper insight into the role of specific cocoa supply chain actors in the context of traceability.** It complements our [Technical Brief on Cocoa Traceability](#), a publication developed to contribute to the global debate on cocoa traceability by providing clarity in defining traceability, what it can help to achieve, and how traceability and transparency in the cocoa sector could be further improved.

This series of case studies aims to provide details on (1) the existing traceability systems and the objectives of various supply chain actors sourcing cocoa from Cameroon, Ghana and Côte d'Ivoire; (2) the reliability and protection of data in traceability systems; (3) how traceability systems operate to provide accountability regarding sustainability commitments. Each case study focuses on a specific theme relevant to the role of that actor in the cocoa supply chain including certification body, trader, primary processors and consumer brand. It considers their approach to traceability, such as mass balance or segregation, and the technology used by their traceability systems (for example, SAP and blockchain). This case study focuses on the mass balance approach to traceability offered by Fairtrade International in addition to their offer of physical traceability.

The case study comprises five sections. In **section 2** we introduce the actor, Fairtrade International, and its role in the cocoa supply chain. In **section 3** we describe the Fairtrade International mass balance traceability system by focusing on three characteristics: 1. information about the origin of cocoa entering the supply chain, 2. links between sustainability characteristics, both at origin level and at later steps in the value chain, and cocoa lots through their different stages of processing and 3. transmission of data along the supply chain. In **section 4**, we outline the challenges to traceability as identified by Fairtrade International. In **section 5** we investigate the potential of a mass balance approach to ensure accountability of sustainability claims.

This case study was jointly commissioned by IDH, the Sustainable Trade Initiative and the German Initiative on Sustainable Cocoa (GISCO) and obtained funding from the UK-funded Partnerships for Forests (P4F) programme in the context of the Cocoa & Forests Initiative.



1. In this document we use the term "value chain" whenever we could use both "value chain" and "supply chain". The term value chain is preferred as it better reflects the perspective of all actors involved.  
2. <https://www.idhsustainabletrade.com/uploaded/2021/01/20210111-RDFC-2-Pager-2-Final.pdf>

## 2. Fairtrade International and its supply chain

Fairtrade international is a prominent certifying body, active in the cocoa sector among others. It offers either the mass balance system or physical traceability depending on the preference of the buyer of a given product. As a standard setting body, Fairtrade International defines compliance criteria to recognise and ensure the level of conformity of organisations with the Fairtrade Standards. If a product displays the FAIRTRADE mark it means that the producers and businesses have met the social, economic and environmental standards set by Fairtrade. Cocoa has grown to be one of the most prominent Fairtrade products since it was first certified in 1994.

According to Fairtrade International, traceability is defined as, "The ability to identify and trace the history, location, use and processing of products and materials". Fairtrade offers both physical traceability and mass balance options for cocoa, tea, sugar and fruit juice. While physical traceability is generally preferred by Fairtrade, it is not compulsory for cocoa certification. Fairtrade considers that it is essentially the decision of the end buyers, based on their perceptions of consumer demand, to decide which system to opt for.



## 3. The Fairtrade International traceability system

### 3.1 Dimension 1: How is origin information obtained and documented?

Fairtrade International certifies cooperatives and traders on the basis of adherence to sets of checkpoints against the Fairtrade standards, called compliance criteria.

The cooperatives are expected to define and implement a procedure to monitor and assess the performance and compliance of their members against the Fairtrade standard, while traders also have their specific Fairtrade Traders standard they must comply with. The criteria Fairtrade International set out range from management of production practices to trade and transport, and business practices concerning the sale of cocoa products.

In line with these criteria, each cooperative certified by Fairtrade is required to maintain member records. In Year 0, data should include at a minimum: member name, contact information, gender, date of birth, registration date with Small Producer Organisations (SPO), farm location and farm size.

At the end of the first year and for each consecutive year of membership, the members' records should be updated to include details on training programs, outcomes of the Fairtrade inspections performed on the farm, cocoa sales of the previous season and estimated member production.

From year 3 onwards Fairtrade International requires that the cooperatives collect household and farm data to assess the needs of members regarding sustainable farm improvements. The intention of this requirement is to help cooperatives ensure compliance with the production related standards, and to provide the basis for cooperatives to define effective training and support measures adapted to the current need of their members, and thereby help improve the sustainability of their farms.

When a cocoa lot is bought from a member farmer, the cooperative is required to provide a receipt to the farmer recording the date at which the product was brought into the warehouse, the weight, and the expected payment based on the weight. The details of this receipt are also recorded in a register at the cooperative or warehouse. From this point on, all the data on movement of the cocoa lots are transferred onto the online traceability platform, Fairtrace, where only completed transactions are recorded, i.e., transactions for

which a responsible price has been secured and full premium payments have been made to the farmers. The cooperative is then required to confirm these transactions, verifying that they have received these payments. This data allows Fairtrade International to identify the cooperatives and to trace the cocoa lots up to level of the cooperatives.

The cooperative must issue a receipt to the farmer for any subsequent payment of Fairtrade Minimum Price differential, and any cash element of the Fairtrade Premium.

As the cocoa lots move along the supply chain, Fairtrade defines specific criteria with regard to how the origin of the product has to be recorded, documented and represented when operating mass balance:

- If a trader/business sells cocoa outputs (beans, semi-processed or processed cocoa) as Fairtrade under mass balance with a claim such as: a specific category (standard or fine flavour) or a specific status (conventional or organic) then the trader/business has to have purchased an equivalent Fairtrade cocoa volume input with the same or higher specifications as indicated in the purchase documentation.
- If a trader/business sells cocoa beans, semi-finished cocoa products or final cocoa products as Fairtrade under mass balance, with a claim regarding a specific origin, then the trader/business has to have purchased the equivalent Fairtrade cocoa volume input from the same origin (as indicated in the purchase documentation). If this is not possible, the trader/business is required to clearly declare this to the customer.
- If the final cocoa product is sold as Fairtrade under mass balance without mentioning any country or region of origin, then the equivalent Fairtrade cocoa volume input can be purchased from any origin. A business or brand can use the FAIRTRADE mark on final cocoa products equivalent to the Fairtrade cocoa volume purchased. In that case, companies use a FAIRTRADE mark with an arrow next to it to direct consumers to information on the back of the packaging that explains more about the ingredients' traceability.
- Fairtrade requires that whenever cocoa products are sold as Fairtrade, it is indicated in the trader/business' sales documentation whether the product was segregated for physically traceable or traded under mass balance.



## COCOA TRACEABILITY CASE STUDY - FAIRTRADE INTERNATIONAL

### 3.2 Dimension 2: How are sustainability characteristics linked to cocoa lots?

Fairtrade International addresses a host of challenges that threaten the long-term sustainability of cocoa and cocoa producing communities through their certification standards. These are; a) economic challenges by assisting farmers to organize as cooperatives and associations, farmer training programs ensuring the payment of fair minimum prices and premiums, b) societal challenges through community development initiatives; c) issues of child labour by protecting children from engagement in cocoa production through inspections, sensitisation etc. d) environmental challenges by promoting environmental sustainability in production and prohibition of the use of pesticides etc. While each of these commitments are important, below we focus on Fairtrade International's standards regarding deforestation, child labour and living income and how these topics are linked to produced cocoa lots in Fairtrade's approach to traceability.

#### Deforestation

West Africa has, for some time, suffered very high rates of deforestation due to a number of factors, not all of which are linked to cocoa production. However, national governments are under pressure to show that cocoa is not a contributing factor. Côte d'Ivoire has extensive areas of land classified as protected forests. Historically, cocoa farmers had official permission to operate within the forest, with cocoa classed as an agroforestry product. However, in the recent years the government has banned any sourcing of cocoa claimed to be sustainable from protected areas.

Fairtrade says, "the risk for Fairtrade certified cooperatives is not so much that members have their farms in protected areas (as these members are excluded from the cooperative and increased GPS mapping of farms makes this easier to identify). The risk is that non-members who produce in protected areas supply members with this cocoa, and "banned" cocoa thereby enters the Fairtrade supply chain". This is why the management and segregation of non-member cocoa from that of members is a key aspect of the cocoa standard at producer level for Fairtrade International. In addition to enforcing segregation of Fairtrade and non-Fairtrade cocoa upon delivery, Fairtrade's standard for SPOs has added new compliance criteria on deforestation, which came into effect in 2019: "Your members do not cause deforestation and do not destroy vegetation in carbon storage ecosystems or protected areas." This further strengthened existing requirements for no cocoa production in protected areas or High Conservation Value areas.

To ensure compliance with these criteria, FLOCERT, the global certifier for Fairtrade, checks that cooperatives do not have members in protected areas as this would demonstrate non-compliance with the Fairtrade standards and the national legislation enforced by the Conseil du Café-Cacao (CCC). Non-compliant cooperatives and other organisations will not be certified.

FLOCERT also has the following assurance activities in place:

- Auditors check the location of all members against the latest Forest Development Corporation (SODEFOR) maps of protected areas in Côte d'Ivoire. When a cooperative is situated close to a protected area, the sampling of the farms to be visited automatically includes those closest to the forests or other protected areas.
- Where no members are listed as located within these areas, but production is taking place near them or routes to delivery points pass through protected areas, auditors choose sample sites to visit in the vicinity. Delivery depot records are sampled to sense check the volume of cocoa against the size of the members' production area.
- Where there is a risk of cocoa from protected areas being delivered with certified cocoa from established certified cocoa cooperatives, Fairtrade ensures that the cooperatives implement a monitoring and traceability system addressing this risk and raising members' awareness of the sanctions against such practices. Members are interviewed regarding the practices of mixing cocoa and delivering it on behalf of others.
- The biodiversity section is also included by default in focused audits, where cooperatives have activities or delivery routes near protected areas. These are always checked, both in initial and renewal audits.

During these audits, Fairtrade advocates as best practice, the collection of data through farm observations such as: planting density, tree age, presence/risk of any debilitating disease, access to/use of planting material, shade management, soil condition/fertility, levels of pruning and weeding practiced, integrated pest management adopted (including safety measures), access to/effective use of fertilizer, sustainable use of organic waste, adoption of agroforestry, etc. Fairtrade says, "Issues around pesticide use are better addressed using pesticide reduction and elimination plans for pesticides on the Hazardous Materials List (HML) list of Fairtrade International."

## COCOA TRACEABILITY CASE STUDY - FAIRTRADE INTERNATIONAL

### Child labour and Living income

Fairtrade International believes that traceability systems will not solve issues of child labour or farmer poverty. While child labour elimination is a requirement of the Fairtrade standard, the company states that issues around child labour are not necessarily addressed by traceability systems, but rather by the wider adoption of monitoring and remediation systems based on community level risks for child labour engagement.

Payment of any differential between the Fairtrade Minimum Price and the reference or market price paid to farmers in Côte d'Ivoire and Ghana must be ensured. For this and any cash elements of Fairtrade premiums paid to farmers, Fairtrade International requires a documented record (paper trail) of cash transfers by the cooperatives to the farmers. This is audited regularly by FLOCERT. In addition to the Fairtrade Standard, Fairtrade has developed a holistic non-mandatory living income strategy<sup>3</sup> to close the income gap.

### 3.3 Dimension 3: How is traceability data transferred along the supply chain and verified?

Fairtrade international works with FLOCERT as the audit and certification body for Fairtrade standards. FLOCERT defines the compliance criteria described in section 3.1. The auditors use these compliance criteria during audits to verify the level of conformity of organisations to the Fairtrade Standards. Audits are conducted annually and/or on the basis of risk assessment. Côte d'Ivoire is categorized as a high-risk area, so the audit frequency is high.

FLOCERT has an online traceability platform, Fairtrace, where each buyer records its purchase and the seller (producer or exporter) must verify that the details of this sale including volume, price, premium and date are correct. An auditor accesses the records before the audit and crosschecks them with evidence held by the trader (including contracts, invoices, delivery notes, bills of lading) and the cooperative (including weighing receipts, member lists, physical segregation at delivery depots, and invoices). The producer organisation is required by the Fairtrade Standard to have a traceability procedure in place which describes the flow of the product from farmer to buyer. During their visits onsite, the auditor follows the procedure as described in the manual and determines whether it has been applied. To this end, the farms as well as section warehouses are visited right up to the main co-operative warehouse. At each point, the auditor checks the documentation as evidence that each step of the traceability procedure is being followed. The audits are

comprehensive: producer delivery notes are checked, the warehouse registers are checked, the warehouse manager and the drivers are interviewed, the daily workers who load and offload the trucks are interviewed, the delegates, the person in charge of environmental issues is interviewed, and so on. Community checks may also be conducted as part of the audits, through informal conversations with farmers neighbouring the farm being audited. The auditor also checks how the member's cocoa is physically kept separate from that of non-members during transportation and at the warehouse. In this manner a lot of information is gathered, and a full picture of the co-operative and its methods is determined.

### Synergy with national traceability systems for transfer of data

Every co-operative in Côte d'Ivoire reports to the CCC, registering every sale of cocoa beans in the Ivorian government's traceability system, called SYDORE. They have to enter details about the identity of the member from whom cocoa is collected and the quantities collected. A specific register exists to record the sale of beans sold as Fairtrade. In this way FLOCERT and the CCC can verify that traders are not double selling certified cocoa.

In the case of Ghana, members deliver their beans to depots where the recorder employed by the Licensed Buying Company (LBC) for the Cocobod weighs and registers the volume and provides a receipt of acknowledgement. The farmer is then paid the national price for what he has delivered.

In Ghana, the largest Fairtrade certified producer organisation has its own License Buying Company (LBC) and, even though its cocoa is traded via the Ghana Cocoa Board (COCOBOD), the beans remain in the producer organisation's labelled bags and are not mixed with other producers' beans during export. The importer may or may not then mix the beans with other origins/producers during processing. For other co-operatives in Ghana, traceability is lost at the level of the COCOBOD warehouse and buyers export mass balance volumes unless they pay the COCOBOD to segregate the beans physically, as is done for organic cocoa).

3. <https://www.fairtrade.net/issue/living-income>



## 4. How does this traceability system provide accountability on sustainability commitments?

### 4.1 Fairtrade definitions for Mass Balance

Fairtrade allows mass balance sourcing for cocoa, tea, sugar and fruit juice. Under mass balance, companies may mix Fairtrade and non-Fairtrade products during the processing and manufacturing process as long as the actual volumes of sales on Fairtrade terms are tracked and audited through the supply chain. This is why mass balance sourcing is said to have “documentary traceability”, as opposed to physical traceability. Cooperatives must keep Fairtrade and non-Fairtrade cocoa physically separate until the point of sale to a trader, unless they process their own cocoa and only sell on mass balance terms<sup>4</sup>. The volume of cocoa sold onward, and the volume equivalent to the cocoa in end products labelled as Fairtrade, cannot exceed what was purchased on Fairtrade terms. The Fairtrade Standard for Cocoa specifies the conversion volume equivalents for processed cocoa (e.g. beans, liquor, butter, powder). In addition, “like for like” rules apply to the non-Fairtrade cocoa mixed under mass balance, including quality, organic, and origin if specified.

**Single-site mass balance:** this means that when a producer or company delivers a quantity of Fairtrade ingredients to a factory or site, only the equivalent amount of processed Fairtrade product leaving that site may be sold as Fairtrade.

**Group mass balance:** This means that the amount of Fairtrade product a company buys must match the amount of the processed product it sells as Fairtrade. The company will be audited on the total amount bought and sold from all of their production sites instead of each individual site.

### 4.2 Rationale behind Fairtrade’s adoption of a mass balance approach

Fairtrade International provides a clear twofold rationale for offering mass balance and physical traceability at the discretion of the buyer in the cocoa supply chain:

1. the limitations of physical traceability to achieve the desired sustainability outcomes;
2. the benefits and safeguards of Fairtrade International’s mass balance approach.

#### 1. The limitations of physical traceability

- Farmers rarely have the means to process their crop. This is done by factories further up the supply chain which typically process in large batches, mixing Fairtrade and non-Fairtrade cocoa together. Enforcing physical traceability would effectively exclude farmers who have no control over how their crop is processed, which would include the majority of the farmers, and particularly the most vulnerable. Mass balance acknowledges the reality of how chocolate is manufactured and provides a mechanism for Fairtrade producers to participate in these large supply chains through documentary traceability.
- Following extensive consultations with producer organizations and traders, Fairtrade concluded that if they only offered physical traceability in the cocoa supply chain, then it is likely that the benefits of Fairtrade to the cooperative and their members would be severely restricted due to the lack of demand, and reluctance to pay the additional costs associated with physical traceability. Physical traceability systems implemented by supply chain actors cost more to implement than a mass balance approach – *“In the case of large-scale chocolate companies the cocoa is processed in huge volumes and uninterrupted: 24 hours a day, 365 days a year. The chocolate recipe is always the same (or very similar) and the companies create different chocolate products by adding minor ingredients in the last stages of the processing. Large chocolate companies therefore cannot guarantee physical separation of Fairtrade from non-Fairtrade without halting their production or switching 100% of all their chocolate to Fairtrade”. Fairtrade also raises the concern that, “there appears to be a finite amount of money set aside by companies to address sustainability issues which invites the consideration of what will be prioritized - farmer poverty, child labour, other pressing issues of sustainability, or traceability in cocoa processing factories?”.*

4. Fairtrade standard for small-scale producer organisations

## COCOA TRACEABILITY CASE STUDY - FAIRTRADE INTERNATIONAL

### 2. The benefits and safeguards in Fairtrade's mass balance system

- By offering mass balance and physical traceability at the buyers' discretion, Fairtrade provides farmers and workers with more opportunities to sell their certified crops. Given the depth of poverty experienced by many small-scale farmers, and the urgency of their need for better terms of trade, this is a workable solution that has given thousands of farmers the opportunity to benefit from Fairtrade.
- The difference with mass balance in Fairtrade is that they actually require the physical movement of the product and not just the movement/transfer of credits as is the case with other certification schemes like Rainforest Alliance<sup>5</sup>.
- Physical segregation of Fairtrade and non-Fairtrade cocoa volumes before sale is mandatory. This is specified because in Côte d'Ivoire, the government allows cocoa cooperatives to purchase a certain fraction of their cocoa from outside of their membership, meaning cooperatives may be holding cocoa that was not produced according to Fairtrade requirements. This cocoa is not permitted to be sold on Fairtrade terms. Therefore, before a Fairtrade co-operative sells its cocoa on to the next buyer, it must be strictly physically separate from any non-Fairtrade cocoa at all times, including cocoa collection, storage and transport by the producer. Consequently, FLOCERT auditors pay very close attention to the segregation procedures of the cooperative and check them during audits. Once the cocoa is sold by the producer organisation, the mass balance rules allow for the mixing of Fairtrade and non-Fairtrade volumes. The exception is for Fairtrade cooperatives that process their own cocoa and only sell it on mass balance terms.

### 4.3 Farmer benefits from enhanced traceability and farmer data

According to Fairtrade International, cocoa producers should benefit from the increasing amounts of data they are asked to provide by multiple actors, such as polygon maps of farms. Farmers and their organisations must be fairly compensated financially for the efforts regarding the traceability and data provision that the market (and potential future regulation) requires. However, these systems and the data should be proprietary to the farmer organisation and their members.

On the issue of data ownership, Fairtrade International believes that supply chain data should belong to the farmers and their cooperatives. Fairtrade International is working to provide access for West African cooperatives to systems and skills to collect, analyse and benefit from the data they are asked to collect for others. The cooperatives can then perform their own analyses and benefits from the results, deciding which supply chain actors to share the data with.



5. 'Credit transfers' refers to the use of credits from a Rainforest Alliance product to claim a conventional product as Rainforest Alliance. Sustainability certificates or credits are issued at the beginning of the supply chain by an independent issuing body and can be bought by market participants, usually via a certificate or credit trading platform. Rainforest Alliance credits can be exchanged from an Rainforest Alliance cocoa product to a similar conventional cocoa product (e.g. Rainforest Alliance butter to conventional butter or Rainforest Alliance liquor to conventional liquor). Mass balance permits credit exchange at a 1:1 ratio between cocoa nibs to cocoa liquor, and cocoa liquor to cocoa butter or to cocoa powder. [https://www.isealalliance.org/sites/default/files/resource/201711/ISEAL\\_Chain\\_of\\_Custody\\_Models\\_Guidance\\_September\\_2016.pdf](https://www.isealalliance.org/sites/default/files/resource/201711/ISEAL_Chain_of_Custody_Models_Guidance_September_2016.pdf); <https://www.rainforest-alliance.org/business/wp-content/uploads/2020/06/Annex-S6-Traceability.pdf>

## 5. Challenges to traceability identified by Fairtrade International and FLOCERT

### Poor documentation by Cooperatives

- While the cooperatives may understand their traceability procedures and implement them, keeping good records of what they do is identified as one of the biggest challenges to traceability by FLOCERT.

### Complexity of cocoa supply chain

- The complexity of the cocoa supply chain is also a challenge as traders do not always use the same cooperatives for their cocoa. Fairtrade observed that certified volume sales may be awarded to a cooperative one year but not repeated the following year or be reduced despite an increase in overall volumes bought on certified terms.
- Some brands require long term relationships with cooperatives, and Fairtrade encourages these relationships: but if they are absent, it is at the traders' discretion where volumes are allocated, and the reason is not always transparent.
- Fairtrade requires traders to provide sourcing plans to cooperatives as part of its Trader Standard and associated compliance criteria. There are cases where the supply chain is quite extensive and challenging to fully document and audit (cooperative to trader to exporter to importer to processor/manufacturer to end product to supermarket).

### Digitization and financial traceability

- Fairtrade maintains a paper trail to record the flow of cash to the member farmers. Research has identified some hesitancy on the part of farmers to move to digitizing the process and to the use of e-money. This may be due to a perception that 'cash is king' in the producing regions, despite the risks associated with carrying large amounts of cash, particularly during the harvest seasons.
- The poor connectivity in rural areas, reluctance to pay a fee to access cash by farmers, however small, for the use of a digital platform and points to cash out payments have been identified as challenges for digitization for financial traceability.
- Fairtrade continues to work on digital payments as the advantages of safety and building a credit rating which may enable easier access to loans for farmers, are important factors.





Co-developed by:



With generous funding from:

